

Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first portion and a second portion, the first portion being coupled to said inner conductor, and

(d) a layer of dielectric material disposed between the second portion of the shunt conductor and the outer conductor, the layer of dielectric material capacitively coupling the second portion of the shunt conductor to said outer conductor.

2. (Previously Presented) The protective device of claim 1 further comprising at least one voltage protective component coupling said outer conductor to said shunt conductor.

3. (Original) A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart, and

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor and the second end of said shunt conductor being coupled to said outer conductor,

(d) wherein said shunt conductor comprises first and second contiguous curved portions, said first and second curved portions extending along different arcuate paths.

4. (Original) The protective device of claim 3 further comprising a radio frequency impedance control (RFIC) tube disposed between said inner conductor and said outer conductor to control the impedance of said inner conductor, said RFIC tube being shaped to define an opening.

5. (Previously Presented) The protective device of claim 4 wherein the opening in said RFIC tube has a longer dimension in length than width, the length of the opening extending at a right angle relative to the longitudinal axis for said RFIC tube.

6. (Previously Presented) The protective device of claim 4 wherein the first portion of said shunt conductor extends out from said inner conductor and through the opening in said RFIC tube along a first curved path, the second portion of said shunt conductor wrapping around said RFIC tube.

7. (Original) A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

- (a) an outer conductor,
- (b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor, and

(d) a plurality of voltage protective components, each voltage protective component being coupled at one end to said shunt conductor and at the other end to said outer conductor.

8. (Previously Presented) The protective device of claim 7 wherein said plurality of voltage protective components are mounted on opposing sides of said shunt conductor.

9. (Previously Presented) A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor comprising a first end and a second end, and

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) wherein said inner and outer conductors together define a first end connector interface at one end of said protective device and said inner and outer conductors together define a second end connector interface at the other end of said protective device, the first and second end connector interfaces capable of being configured as either a male end connector interface or a female end connector interface.

10. (Previously Presented) The protective device of claim 9 wherein said inner conductor comprises a female pin at its second end, wherein the second end of the outer conductor can be configured as either a female connector end or a male connector end.

11. (Previously Presented) The protective device of claim 9 wherein said inner conductor comprises a male pin at its second end, wherein the second end of the outer conductor can be configured as either a female connector end or a male connector end.

12-13. Canceled.

14. (Previously Presented) A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor and the second end of said shunt conductor being coupled to said outer conductor, and

(d) a first pair of insulators covering at least a portion of said inner conductor, said first pair of insulators insulating at least a portion of said inner conductor from said outer conductor, said first pair of insulators acting to regulate the longitudinal radio frequency (RF) impedance for said protective device.

15. (Original) The protective device of claim 14 wherein said first pair of insulators can be replaced with a second pair of insulators to change the RF impedance for a portion of the length of the inner conductor.

16. (Original) The protective device of claim 15 wherein one of said first and second pairs of insulators causes said protective device to operate as a narrow-band device and the other of said first and second pairs of insulators causes said protective device to operate as a wide-band device.

17. (Original) The protective device of claim 14 wherein said first pair of insulators is sized and shaped so as to define at least one region of air between said inner conductor and said outer conductor.

18. (Previously Presented) The protective device of claim 14 wherein said first pair of insulators is sized and shaped such that no substantial region of air is defined between said inner conductor and said outer conductor.

19. (Previously Presented) The protective device of claim 17 wherein each of said first pair of insulators has an inner diameter which is non-uniform along its length.

20. (Previously Presented) The protective device of claim 14 further comprising a second pair of insulators which includes a first annularly-shaped portion and a second annularly-shaped portion, said first and second annularly-shaped portions having different thicknesses.

21. (Previously Presented) The protective device of claim 14 further comprising a second pair of insulators which is shaped to include a projection which extends between said inner and outer conductors.

22. (Previously Presented) The protective device of claim 21 wherein a portion of the inside diameter of said outer conductor is approximately 2.2 through 2.5 times the outside diameter of said inner conductor so as to define at least one air gap therebetween.

23. (Previously Presented) The protective device of claim 22 wherein each projection of said second pair of insulators projects into a corresponding air gap between said inner and outer conductors.

24. (Original) The protective device of claim 14 wherein said first pair of insulators comprises at least two different dielectric constant materials.

25. (Previously Presented) A protective device for electromagnetic signals, said protective device comprising:

- (a) an outer conductor,
- (b) an inner conductor extending coaxially with said outer conductor, said inner and outer conductors being spaced apart, and
- (c) a shunt conductor coupled to said inner conductor, and
- (d) wherein said outer and inner conductors together define a connector at each end of said protective device,
- (e) wherein said inner conductor has a normal polarity configuration and includes first and second pins,
- (f) wherein exchanging the first and second pins of said inner conductor produces a reverse polarity connector configuration.

26. (Original) The protective device of claim 25 wherein one connector for said protective device is female of normal polarity and the other connector is convertible between a female interface and a male interface.

27. (Original) The protective device of claim 25 wherein male pins are exchanged for female pins, said male pins being the same as in a male to female normal polarity configuration.

28. (Previously Presented) The protective device of claim 6 wherein the second portion of said shunt conductor is in the form of a helix that coils around said RFIC tube.

29. (Previously Presented) A protective device comprising:

(a) a first conductor,

(b) a second conductor, and

(c) a plurality of gas discharge tubes coupled between said first and second conductors.

30. (Previously Presented) The protective device of claim 29 further comprising a shunt conductor, wherein at least one of said plurality of gas discharge tubes is coupled to said first conductor by said shunt conductor.

31. (Previously Presented) The protective device of claim 14 further comprising a second pair of insulators, said second pair of insulators being inserted between the inner and outer conductors, said second pair of insulators causing said protective device to operate as a wide-band device.